

## COMPARISON: FIELD SAMPLE COOLING TOWER WATER Using Different Biocides

Sample supplied by Customer on 5/4/05  
pH 8.2 adjusted to 8.7 with Na<sub>2</sub>CO<sub>3</sub>

Test Matrix	Time (minutes)									
	0		10		30		60		17 hrs.	
	ppm (Cl <sub>2</sub> )	log10 Initial (cfu/ml)	ppm (Cl <sub>2</sub> )	log10 Reduction (cfu/ml)	ppm (Cl <sub>2</sub> )	log10 Reduction (cfu/ml)	ppm (Cl <sub>2</sub> )	log10 Reduction (cfu/ml)	ppm (Cl <sub>2</sub> )	log10 Reduction (cfu/ml)
Stabrom 909 (6.9%) <i>Albemarle</i>	0.86	7.18	0.79	0.07	0.72	0.14	0.59	0.92	0.14	NM
BromMax (10.2%) <i>Enviro Tech</i>	0.92	7.18	0.81	0.19	0.74	0.33	0.68	0.92	0.20	NM

Hardness - 100 ppm as CaCO<sub>3</sub>

Conductivity - 427 uS/cm

NM = not measured

- (1) Samples were spiked with different amounts of product to target a 1.0 ppm residual (as active Cl<sub>2</sub>).
- (2) Residual analysis was performed using a HACH colorimeter with DPD 'total' indicator pillow packs.
- (3) Samples were neutralized using metabisulfite and bacteria plates were taken at specified times.
- (4) Controls were also treated with the neutralizer to verify no interference.
- (5) Challenge organism was *Pseudomonas aeruginosa* (slime former).

**Conclusions:** There is an insignificant difference in long-term efficacy or residual (product) persistency in this test.